

Proposed Plan/Draft Remedial Action Plan for Operable Unit 4A Former MCAS Tustin



July 2004

Tustin, California

Marine Corps Proposes No Further Action for Soil and Groundwater at Six Sites

PROPOSED PLAN SUMMARY

The Marine Corps invites you to review and comment on a plan to take no further cleanup action at six sites at the former Marine Corps Air Station (MCAS) Tustin. These sites are part of the base's Installation Restoration Program (IRP), an ongoing program to investigate and clean up soil and groundwater contamination from past military activities. The six sites are locations where chemicals such as cleaning solvents and fuels may have leaked or been spilled onto the ground. The Marine Corps is proposing no further action (no further testing or cleanup) for the sites because either no contamination was found, or the contamination is at such low levels that it does not pose a risk.

These sites collectively are called Operable Unit 4A (OU-4A). The map on page 2 shows the locations of the OU-4A sites.

This Proposed Plan/Draft Remedial Action Plan (called simply Proposed Plan hereafter) is a brief, generally non-technical summary of the sites and the No Further Action (NFA) proposal. Full technical details are in a document titled "Final OU-4 Technical Memorandum," which is available at the MCAS Tustin Information Repository at the University of California Irvine Main Library (see page 5 for location).

The MCAS Tustin Base Realignment and Closure Cleanup Team, consisting of representatives from the Marine Corps, California Environmental Protection Agency (Cal/EPA), and U.S. EPA, has carefully evaluated the investigation results. The team concurs with the Marine Corps' recommendation for NFA at these six sites.

30-Day Public Comment Period and Public Meeting

30-Day Public Comment Period

July 27 to August 25, 2004

We encourage you to comment on this Proposed Plan during the 30-day public comment period. Comments may be submitted orally or in writing at the August 5, 2004 public meeting, or via mail, fax, or e-mail. Please see page 6 for information on how to submit comments.

Public Meeting

Thursday, August 5, 2004, 6:30 p.m.

Location: Tustin Senior Center Conference Room, 200 South "C" Street, Tustin

You are invited to this community meeting to discuss the OU-4A sites. Marine Corps representatives will provide visual displays and results of the environmental investigations. You will have an opportunity to ask questions and formally comment on the proposed No Further Action plan.

Soil and Groundwater Samples Taken and Analyzed

Over the years the Marine Corps conducted a series of investigations at the OU-4A sites. These investigations included taking numerous samples of soil, sediment, and groundwater to find out:

- what chemicals, metals, or other contaminants are present
- at what levels
- if they pose a risk to human health

At some of the sites no contamination was found. At others, low levels of chemicals and metals were found in the soil and/or groundwater. The contaminants found at the OU-4A sites include:

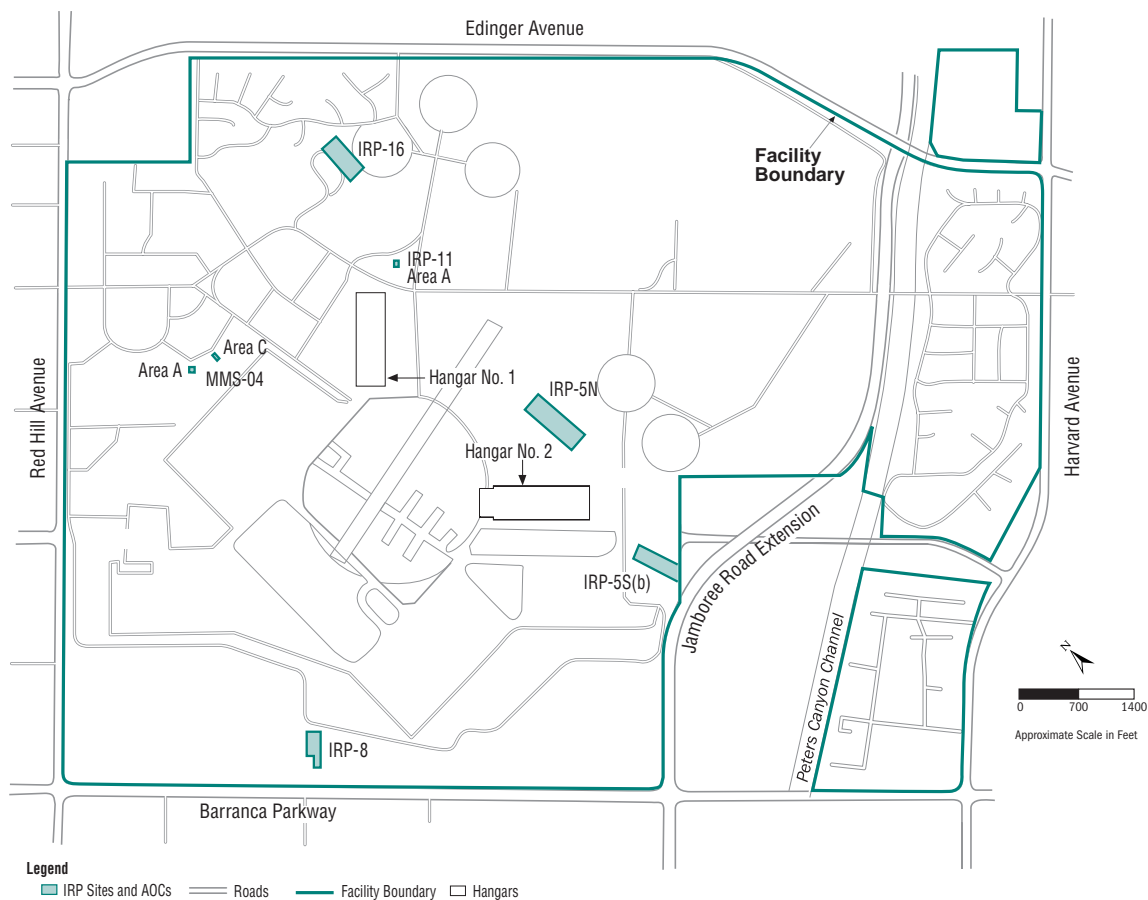
Volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs): These are chemicals found

in industrial solvents commonly used in dry cleaning, metal plating, and machinery degreasing operations. Some VOCs and SVOCs can cause cancer at high levels of exposure.

Polynuclear aromatic hydrocarbons (PAHs): These are a specific group of SVOCs, some of which may cause cancer at high levels of exposure.

Metals: Those present at the OU-4A sites include aluminum, antimony, arsenic, beryllium, cadmium, chromium, lead, manganese, molybdenum, selenium, silver, and thallium. Arsenic, beryllium, and chromium are known to cause cancer. Arsenic, cadmium, chromium, manganese, and selenium occur naturally in the soils native to the MCAS Tustin area.

Figure 1 Former MCAS Tustin—Locations of OU-4A Sites



OU-4A Sites

IRP-5N—Drainage Area No. 1, Ditch 5 North
 IRP-5S(b)—Drainage Area No. 1, Ditch 5b South
 IRP-8—Drainage Area No. 2
 IRP-11—Drum Storage Area No. 1, Area A

IRP-16—VOC Solvent Contamination Area
 MMS-04—Auto Hobby Shop, Area A
 MMS-04—Auto Hobby Shop, Area C

Risk Assessment to Determine Need for Cleanup

To determine if the chemicals found in soil and groundwater pose a risk to human health, the Marine Corps performed an analysis called a risk assessment using U.S. EPA guidelines (see Table 1 below). The risk assessment is an important part of the decision of whether the site needs to be cleaned up or can be considered for No Further Action. For the OU-4A sites, the risk assessment was based on the assumption that the sites would be used for residential purposes in the future. This assumption requires using the strictest (most cautious and conservative) evaluation of potential health risks for each site.

The Marine Corps considered different ways that people might be exposed to the contaminants found, the concentrations that people might be exposed to, and the potential frequencies and durations of their exposures. To apply the highest cleanup standards possible, the Marine Corps assumed that residents would live on-site and be exposed to chemicals in soil and groundwater every day for 30 years. They also assumed that residents would be exposed to chemicals in soil and groundwater through ingestion (eating dirt and drinking shallow groundwater), breathing in vapors or dust, and getting contaminated dirt and surface water on their skin.

These assumptions are overly conservative, since people would not actually be exposed to this much contamination. However, this deliberate over-estimation of the risk helps ensure that the analysis results give the highest level of protection.

The risk assessment determined that nearly all OU-4A sites do not pose unacceptable cancer risks to possible future residents (see Table 2 on page 5). At IRP-16, the Marine Corps, U.S. EPA and Cal/EPA agree that the cancer risk is also acceptable when site-specific factors are considered. These factors include the type, location, and concentration of chemicals at the site, natural breakdown of chemicals over time, quality of the data provided by studies, planned future uses for the property, and the conservative nature of the risk assessment itself. The risk assessment also found little potential for non-cancer health effects to develop from the low levels of chemicals at the OU-4A sites. The Marine Corps, U.S. EPA, and Cal/EPA agree that the non-cancer risk at IRP-16 is allowable, since 90% of the estimated non-cancer risk is due to the metals selenium and manganese, both of which occur naturally in groundwater at former MCAS Tustin.

Table 1: Risk Ranges to Protect Human Health

Health Risks	Unacceptable Risks	Risk Management Range/ Generally Allowable Risks	Allowable Risks
Cancer	More than 1 additional cancer case in a population of 10,000 (greater than 1×10^{-4})	1 additional cancer case in a population of 10,000 to 1 additional cancer case in a population of 1,000,000 (1×10^{-4} through 1×10^{-6})	Less than 1 additional cancer case in a population of 1,000,000 (less than or equal to 1×10^{-6})
Non-cancer	A hazard index equal to or greater than 1 should be evaluated further.	---	A hazard index less than 1

“No Further Action” Decision Would Allow Transfer of Property

In 2004 a decision was made to split OU-4 into OU-4A (NFA sites) and OU-4B (sites requiring further action). That decision allows for a faster process to transfer property for the OU-4A sites. The OU-4B sites that require further action will be further investigated and evaluated for possible cleanup.

In May 2002, most of the former MCAS Tustin property that was eligible for transfer was conveyed to the city of Tustin. Other property within the former housing areas at former MCAS Tustin was transferred in March 2003 through public sale. Station property with contamination that has yet to be addressed, or is under further investigation, is not yet eligible for transfer. The law states that before property transfer can occur, contamination must be cleaned up or a selected remedy must be in place and operating successfully.

Site Summary Descriptions and Recommendations

The summaries below briefly describe each OU-4A site and the investigation and risk assessment results. Further details are presented in the “Final OU-4 Technical Memorandum.”

IRP-5N: DRAINAGE AREA NO. 1—DITCH 5 NORTH **IRP-5S(b): DRAINAGE AREA NO. 1—DITCH 5b SOUTH**

IRP-5N is about 2.5 acres and IRP-5S(b) is about 1.4 acres in size. Both sites form part of a drainage system that collects surface water runoff from most of the north-western portion of the former station. The site is currently open and partially grass-covered. Contaminants including fuels, oils, lubricants, and solvents may have leaked onto the sites through building floor drains connected to the drainage system.

IRP-5N Contaminants Found

Sediment: VOCs, SVOCs, PAHs, pesticides, and metals

Soil, groundwater, and surface water: None

IRP-5S(b) Contaminants Found

Sediment: SVOCs, metals

Soil, groundwater, and surface water: None

Contaminants found in sediment were at levels that do not pose a threat to human health and/or the environment.

IRP-8: DRAINAGE AREA NO. 2

IRP-8 covers about 1.2 acres in the southwest portion of the former station. The site is unpaved and includes two small buildings which were used to store hazardous materials and hazardous waste. One drainage ditch runs along the eastern boundary of the site. Another former ditch, which was filled with soil in the late 1980s, runs through the central portion of the site. Several thousand gallons of diesel fuel for power generators was reportedly spilled at the site between 1976 and 1982.

Contaminants Found

Soil: VOCs, PAHs, SVOC, metals

Groundwater: VOCs, SVOC, metals

Contaminants found in soil and groundwater were at levels that do not pose a threat to human health and/or the environment.

IRP-11: DRUM STORAGE AREA NO. 1, AREA A

IRP-11 (Area A) covers an area of about 250 square feet in the north-central portion of the former station. The site includes an area where two stains were seen on an asphalt pad near a grass field located northeast of Hangar No. 1 (Building 28) about 50 feet east of old railroad

tracks. No information regarding the history of Area A could be found.

Contaminants Found

Soil: None

IRP-16: VOC SOLVENT CONTAMINATION AREA

IRP-16 covers about 1.6 acres along railroad tracks in the northwest portion of the former station. The site is currently open and partially covered with grass. The site includes railroad tracks that were used for loading and unloading of products and equipment, a drainage ditch located between the railroad tracks, and a road, which is still visible. Soil and groundwater samples were collected at IRP-16 in 1996, and soil contaminated with petroleum products was removed.

Contaminants Found

Soil: VOCs, PAHs, SVOCs, metals

Groundwater: VOCs, SVOCs, metals

Contaminants found in soil and groundwater were at levels that do not pose a threat to human health and/or the environment.

MMS-04: AUTO HOBBY SHOP, AREA A

This is an area of stained soil that covers about 300 square feet in the northwestern portion of former MCAS Tustin. The site is an unpaved, partially grassy area just outside the fence enclosing the Auto Hobby Shop.

Contaminants Found

Soil: PAHs, metals

Contaminants found in the soil were at levels that do not pose a threat to human health and/or the environment.

MMS-04: AUTO HOBBY SHOP, AREA C

This site covers about 0.2 acre just outside the fence enclosing the Auto Hobby Shop Area in the northwestern portion of the former station. The site is unpaved and partially covered with grass. It includes a small drainage ditch, which reportedly received waste oil runoff from the Auto Hobby Shop Area.

Contaminants Found

Soil: VOCs, PAHs, PCBs, metals

Groundwater: None identified

Contaminants found in the soil were at levels that do not pose a threat to human health and/or the environment.

Table 2: Summary of Risk Results, Risk Management Considerations, and Recommended Actions.

Site	Cancer Risk Residential Scenario ¹	Non-cancer Risk Residential Scenario/Hazard Index	Risk Management Considerations	Recommended Actions
IRP-5N	3.9 additional cases in 10,000,000	0.094	No risk drivers were identified	No Further Action
IRP-5S(b)	3.6 additional cases in 10,000,000	0.54	No risk drivers were identified	No Further Action
IRP-8	2.5 additional cases in 1,000,000	0.14	The risk driver present is 1,2-DCP. 1,2-DCP concentrations are less than the MCL	No Further Action
IRP-11, Area A	N/A ²	N/A ²	N/A ²	No Further Action
IRP-16	6.5 additional cases in 100,000	9.32 ³	The risk drivers present are arsenic, manganese, selenium, and TCE. No site activities involved the use of arsenic, manganese, or selenium.	No Further Action
MMS-04, Area A	4.7 additional cases in 100,000,000	0.008	No risk drivers were identified	No Further Action
MMS-04, Area C	9.4 additional cases in 10,000,000	0.04	No risk drivers were identified	No Further Action

1 – Risk results are based on U.S. EPA criteria (see Table 1 on page 3).

2 – No risk assessment was performed for IRP-11, Area A because no chemicals were reported during sampling activities at the site.

3 – Risk associated with the hazard index at IRP-16 is attributed to arsenic, manganese, and selenium, which are naturally occurring metals in native soil and groundwater on former MCAS Tustin property, and are not associated with past site activities.

Investigation Reports and Risk Assessment Results Available for Review and Comment

The collection of reports and historical documents used by the Marine Corps in making cleanup decisions is the Administrative Record (AR). The AR includes the site investigation reports, health risk assessments, and other technical documents. The AR is available for public review at former MCAS El Toro. To arrange a time to review documents during the public comment period (July 27–August 25, 2004), contact Ms. Marge Flesch at (949) 726-5398.

Key OU-4A documents and a complete index of all former MCAS Tustin AR file documents are also available at the University of California Irvine, Main Library, Government Publications Department. Call (949) 824-7362 or (949) 824-6836.

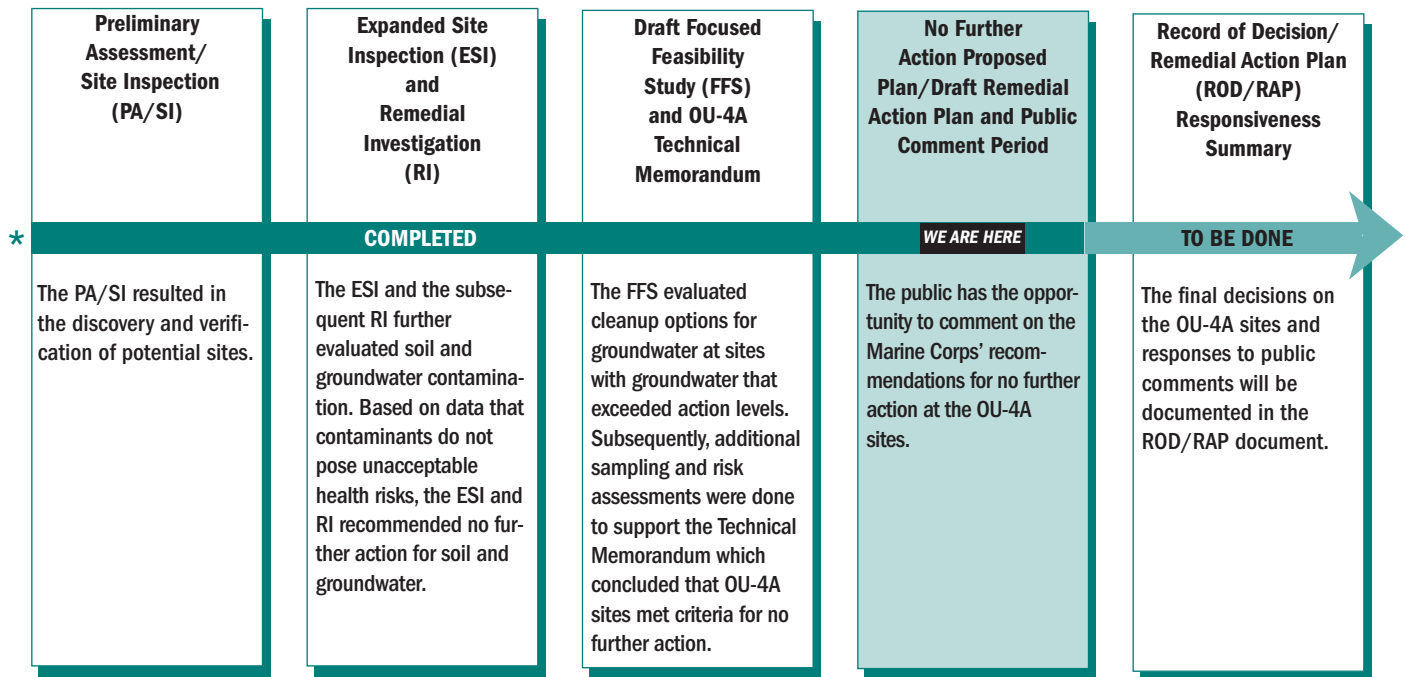
Internet Connection

For more information on the closure of MCAS Tustin and the Installation Restoration Program, check out the Naval Facilities Engineering Command, Southwest Division Website at:

www.efdswn.navfac.navy.mil/environmental/envhome.htm

Installation Restoration Program Process—OU-4A Sites

The arrow* shows the status of OU-4A.



The Next Step for OU-4A—Public Review and Comment

Comments on this Proposed Plan received during the period from July 27 to August 25, 2004 will be considered in the final decision for the OU-4A sites. Each comment will be responded to in writing in a Responsiveness Summary. The Responsiveness Summary will be part of the OU-4A ROD/Final RAP, which will formally document the final decision for the OU-4A sites.

During the public comment period, community members may submit comments by mail, fax or e-mail to:

Jerry Dunaway, MCAS Tustin
BRAC Environmental Coordinator
7040 Trabuco Road
Irvine, CA 92618
fax (949) 726-6586
e-mail: jerry.dunaway@navy.mil

Comments must be postmarked, faxed, or e-mailed no later than August 25, 2004.

MCAS Tustin Restoration Advisory Board

The community-based MCAS Tustin Restoration Advisory Board (RAB) is made up of representatives from local agencies and members of the public.

The RAB meets bimonthly with Marine Corps and regulatory agency representatives to discuss environmental issues. All RAB meetings are open to the public. The RAB has reviewed and commented on all the reports for OU-4A.

If you are interested in becoming a member of the RAB, please complete the mailing coupon on the last page. For more information on RAB membership, please contact Mr. Jerry Dunaway, Navy RAB Co-Chair, at (949) 726-5398 or (619) 532-0975.

Who to Contact For More Information

The Marine Corps encourages community involvement in the decision-making process of the environmental restoration program at former MCAS Tustin. If you have any questions or concerns about environmental activities at MCAS Tustin, please feel free to contact any of the following project representatives:

Mr. Jerry Dunaway

BRAC Environmental Coordinator
Base Realignment and Closure
Attn: Jerry Dunaway, MCAS Tustin
7040 Trabuco Road
Irvine, CA 92618
(949) 726-5398
(619) 532-0975
jerry.dunaway@navy.mil

Ms. Viola Cooper

Community Involvement
Coordinator
Superfund Division, U.S. EPA
Office of Hazardous Waste
75 Hawthorne St. (SFD-3)
San Francisco, CA 94105
(800) 231-3075
cooper.viola@epa.gov

Mr. Tim Chauvel

Public Participation Specialist
Cal/EPA, Dept. of Toxic Substances Control
5796 Corporate Avenue
Cypress, CA 90630
(714) 484-5487
tchauvel@dtsc.ca.gov

MAILING LIST COUPON

If you would like to be on the mailing list to receive information about environmental restoration activities at MCAS Tustin, please complete this coupon and mail to: Base Realignment and Closure, Attn: Jerry Dunaway, BRAC Environmental Coordinator, MCAS Tustin, 7040 Trabuco Road, Irvine, CA 92618

- ☐ Add me to the MCAS Tustin Installation Restoration Program mailing list.
- ☐ Send me information on Restoration Advisory Board membership.

Name _____

Street _____

City _____

State _____ Zip Code _____

Affiliation (optional) _____

Telephone _____

Commander
Naval Facilities Engineering Command, Southwest Division
Attn: Jerry Dunaway, 06CMJD
BRAC Environmental Coordinator
MCAS Tustin
1220 Pacific Highway
San Diego, CA 92132-5190

Official Business
Penalty for Private Use
\$300

